1-1-2006

Forage Shortages … Low Milk Prices … and How to Beat Them

Alvaro Garcia
South Dakota State University

South Dakota State University Cooperative Extension Service
SDSU
Extension Extra
ExEx 4026
Dairy Science
COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / USDA

Forage shortages ... low milk prices ... and how to beat them

Alvaro Garcia, Dairy Science Department

When facing a less than optimum relationship between milk price and cost of production ...
- ... focus on diluting fixed costs
- ... stock the farm with profitable cows
- ... clean up any management flaws before buying additional cows

If you want to reduce expenses ...
- ... do it in those areas that do not directly affect the cows
- ... increase production from existing cows, **probably the best way to improve net returns**
- ... improve forage quality
- ... consider using locally available byproducts to stretch forage inventories, perhaps decrease feeding costs

As a result of the drought, forage quality is poor and not much is available. Grain is in short supply. So it should come as no surprise that the laws of supply and demand are at work and that prices for both types of feed have almost doubled since last year.

At the same time, dairy cow numbers and individual cow production in the 20 leading states are on the rise, pushing the price of milk to its lowest point in decades. Dairy producers may need to consider some new options.

Opportunity milk

Profitability is a function of the milk price minus the cost of production, multiplied by the volume produced. If you are paid $12 for milk and your cost of production is $13 per hundredweight, it seems you are losing $1 for every additional 100 lb produced.

Reducing the cost of milk production makes sense only when milk prices are constant. But when the milk price drops below already adjusted production costs, where else can you cut costs before your trimming begins to show up in lower milk production?

There's another way to look at the cost/return problem: **Opportunity milk is the additional milk produced by a cow with the genetic potential to respond when management conditions are improved.**

It is this additional milk produced by existing dairy cows that generates the most profit on a dairy farm.

The cost associated with producing this additional milk is usually only for the feed, thus turning income over feed costs into net profit. The opportunity milk dilutes fixed costs because these are already taken into account.

At current milk prices, a 100-cow dairy that increases production by 3 lb per cow per day will net approximately $6,500 more per year.

Increasing production while maintaining costs

If milk volume can't be increased by improving production per cow, will adding extra cows raise income?

Before buying more animals, make sure each stall is occupied by cows in production, milked to their genetic potential, and economically outperforming any herd mates waiting to take their places.

If the barn is slightly overcrowded, make sure every stall is functional and that feed-bunk space is not limiting. A

slightly overcrowded facility can improve total milk shipped only if it does not compromise cow comfort.

Before committing to any plan, check the quality of your feed and forage.

Then allocate those forages, matching their quality with the physiological requirements of each animal group. Early lactation cows require high energy-dense rations and should be provided the best quality forages possible.

In the current forage shortage, sources of digestible fiber are among the most urgent needs when balancing lactating cow diets. Poor grain yields suggest corn prices will continue to increase. It makes sense, then, to look at alternatives that will not only stretch out the farm forage inventory but at the same time add energy to the ration.

Several byproducts in the market may help to stretch out forage supplies. Although none is considered a significant source of rumen "scratch" factor, they provide effective fiber, as measured by their ability to increase butterfat, and fermentable energy without the risk of excessively reducing rumen pH.

The most abundant of these is distillers grains. A byproduct of the ethanol industry, distillers grains are rich in energy, supplying nutrients such as protein, lipids, and fiber. The lack of significant amounts of starch (fermented for alcohol production) makes it an ideal energy supplement with little effect in decreasing rumen pH.

Soy hulls and beet pulp can also be valuable sources of fermentable fiber. Although they are both lower in protein content than distillers grains, their highly fermentable fiber makes them a valuable asset for lactating dairy cow diets.

All three byproducts cost between $90 and $110 per ton. According to the National Research Council (2001), energy content of both beet pulp and soy hulls is 5% higher and distiller's grains 40% higher than that of good quality immature alfalfa hay currently selling for $130 per ton.

A 50:50 mix of distillers grains with either soy hulls and/or beet pulp will provide effective fiber, similar amounts of protein (22%), and 20% more energy than good quality alfalfa hay and will cost $30 less per ton.

One other possibility is to use these byproducts in combination with poor quality roughages. You could then feed less of a high-NDF forage to get the required effective fiber ("scratch factor") and still meet total NDF requirements. Total energy supply will also be improved by the combination of both feeds.

Increasing margin at a given volume and production cost

Producers usually believe they have little to no control over milk price, but the pennies do add up.

Decreasing somatic cell counts from 400,000 to 300,000 can improve the milk check by approximately $0.15 per cwt and increase milk production by close to 1.3 lb per cow per day. That's an additional $0.08 per cow daily even with feed costs at $5 per cwt and milk at $10/cwt.

Decreasing bacterial counts from 51,000 to 25,000 will add an additional $0.10.

In short, improving milk quality can represent close to $0.30 per hundredweight or $5,400 and $7,200 per year for a 100-cow dairy producing 18,000 lb and 24,000 lb rolling herd respectively.

The above calculations do not consider the reduced mastitis treatment costs, reduced culling rates and improved selection, and improved selling value of the cows if sold for dairy rather than for beef.

Increasing margin by reducing expenses

Certain "expenses" are more of an investment in the most important cash-generating unit, the dairy cow.

Reducing feed costs by buying low quality feeds is a short-lived solution. Saving money by using less bedding or replacing it sparingly will also negatively impact production, cow longevity, and your milk check. The same goes for other expenses such as veterinary costs, hiring highly qualified labor, and general heifer and cow care.

Expenses that don't have a direct positive impact on the cows or are not critical for normal farm function should be postponed. Purchasing new equipment, vehicles, or land, paving the driveway, or painting the barn can wait for an improved economic situation.

Purchases of dairy replacements need to be carefully assessed from an economic perspective. Why are additional replacements required? If due to high culling rates in the current herd, perhaps you first should improve management and facilities to increase productive life of the current herd.

This publication can be accessed electronically from the SDSU College of Agriculture & Biological Sciences publications page at http://agbiopubs.sdstate.edu/articles/ExEx4026.pdf
or from the Extension Service Drought Information Website at http://sdces.sdstate.edu/drought/

ExEx4026, 2002, 2006.